ABSTRACT OF THE DISCLOSURE

Glass, glass compositions, methods of preparing the glass compositions, microfluidic devices that include the glass composition, and methods of fabricating microfluidic devices that include the glass composition are disclosed. The borosilicate glass composition includes silicon dioxide (SiO_2) in a range from about 60% to 74% by total composition weight; boric oxide (B_2O_3) in a range from about 9% to 25% by total composition weight; aluminum oxide (Al_2O_3) in a range from about 7% to 17% by total composition weight; and at least one alkali oxide in a range from about 2% to 7% by total composition weight. In addition, the borosilicate glass has a coefficient of thermal expansion (CTE) that is in a range between about 30 x 10^{-7}/°C and 55 x 10^{-7}/°C. Furthermore, the borosilicate glass composition resists devitrification upon sintering without the addition of an inhibitor oxide.